



Résumé of
STEPHEN J. FENTON, P.E.

Kineticorp™

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EXPERIENCE:

- President and Principal Engineer, Kineticorp, LLC, 2005 to Present
- Vice President, Principal Engineer, and Senior Engineer, Knott Laboratory, Inc., Denver, Colorado 1995 to 2005
- President, Fenton/Kerr Engineering, Inc., Denver, Colorado, 1993 to 1997
- Area Manager, Peter Kiewit Sons', Inc., Omaha, Nebraska, 1990 to 1993
- Project Engineer and Superintendent, Twin Mountain Rock Company, Albuquerque, New Mexico, 1987 to 1990
- Field Engineer, Kiewit Western Company, Denver, Colorado 1983 to 1987

REGISTRATIONS: Mr. Fenton is registered as a Professional Engineer in the State of Colorado. He is a fully accredited Traffic Accident Reconstructionist through the Accreditation Commission for Traffic Accident Reconstruction (ACTAR).

EDUCATION: **B.S., Engineering**, Civil Specialty, Colorado School of Mines, Golden, Colorado, 1987.

AWARDS: Mr. Fenton was a co-author on a paper that received the [2006 Arch T. Colwell Merit Award](#) from the Society of Automotive Engineers. This award recognizes authors of outstanding papers presented at SAE meetings. Papers are judged for their value as contributions to existing knowledge of mobility engineering.

FORENSIC ENGINEERING: Mr. Fenton investigates and reconstructs vehicular accidents and provides expert testimony in State and Federal courts for both defendants and plaintiffs. In the course of his work as a forensic engineer, Mr. Fenton actively participates in the accident reconstruction community.

- Mr. Fenton chaired the Photogrammetry Committee for the Society of Automotive Engineers (SAE) from 2001 to 2012, and participated as a team member in the Accident Investigation and Accident Reconstruction Standards Committee (AIARSC). As a part of the AIARSC, he participated in the following subcommittees: Investigation Techniques, Vehicle Road Friction, Reconstruction Analysis, Information Resources, and Motor Vehicle Fire Investigations Task Force. Through his involvement with these committees, Mr. Fenton participated in establishing professional guidelines and protocols for accident investigation and reconstruction.
- Mr. Fenton has conducted accident investigations as a team member for the National Highway Traffic Safety Administration's (NHTSA) Crash Injury Research and Engineering Network (CIREN), which teams engineers with doctors to gather real-world crash data and to evaluate occupant injuries.
- Mr. Fenton has given presentations and lectures at a number of national and international technical conferences, including the Society of Automotive Engineer's World Congress and Northeastern University's *Symposium on Criminal Justice*. He conducts seminars for regional bar associations and engineering societies on photogrammetry and vehicular accident reconstruction.
- Mr. Fenton has authored numerous technical articles in the areas of accident reconstruction, photogrammetry, and computer animation, which have been published in the SAE's *Technical Paper Series*, *Accident Reconstruction Journal*, and the *National Academy of Forensic Engineers*.
- Mr. Fenton has been awarded grants related to photogrammetric documentation and has been listed as a training specialist for close-range photogrammetry software.
- Mr. Fenton's accident reconstruction expertise has been featured on such television programs as MSNBC's "Why Cars Crash," Discovery Channel's "Discover Magazine – The Science behind the Headlines" and NBC's News Magazine "Dateline."

PROFESSIONAL AFFILIATIONS:

- Society of Automotive Engineers (SAE), Member
- ASCE (American Society of Civil Engineers), Member
- SPIE (The International Society for Optical Engineering), Member
- ASPRS (American Society of Photogrammetry and Remote Sensing), Member

Stephen J. Fenton, P.E.
President and Principal Engineer



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Publications

1. Beauchamp, Gray, Hessel, David, Rose, Nathan A., **Fenton, Stephen J.**, “[Determining Steering and Braking Levels from Yaw Mark Striations](#),” Paper Number 2009-01-0092, Society of Automotive Engineers, 2009, published in the *SAE International Journal of Passenger Cars – Mechanical Systems*.
2. Rose, Nathan A., Beauchamp, Gray, **Fenton, Stephen J.**, “[The Influence of Vehicle-to-Ground Impact Conditions on Rollover Dynamics and Severity](#),” Paper Number 2008-01-0194, Society of Automotive Engineers, 2008.
3. Rose, Nathan A., **Fenton, Stephen J.**, Beauchamp, Gray, “[Analysis of Vehicle-to-Ground Impacts during a Rollover with an Impulse-Momentum Impact Model](#),” Paper Number 2008-01-0178, Society of Automotive Engineers, 2008.
4. Rose, Nathan A., Neale, W.T.C., **Fenton, Stephen J.**, Hessel, D., McCoy, R.W., Chou, C.C., “[A Method to Quantify Vehicle Dynamics and Deformation for Vehicle Rollover Tests Using Camera-Matching Video Analysis](#),” Paper Number 2008-01-0350, Society of Automotive Engineers, 2008.
5. Funk, J. R., Beauchamp, G., Rose, Nathan A., **Fenton, Stephen J.**, Pierce, J., “[Occupant Ejection Trajectories in Rollover Crashes: Full-Scale Testing and Real World Cases](#),” Paper Number 2008-01-0166, Society of Automotive Engineers, 2008.
6. Rose, Nathan A., Beauchamp, Gray, **Fenton, Stephen J.**, “[Factors Influencing Roof-to-Ground Impact Severity: Video Analysis and Analytical Modeling](#),” 2007-01-0726, Society of Automotive Engineers, 2007.
7. Rose, Nathan A., **Fenton, Stephen J.**, Beauchamp, Gray, “[Restitution Modeling for Crush Analysis: Theory and Validation](#),” 2006-01-0908, Society of Automotive Engineers, 2006.
8. Chou, C., McCoy, R., **Fenton, Stephen J.**, Neale, W., Rose, Nathan, “[Image Analysis of Rollover Crash Test Using Photogrammetry](#),” 2006-01-0723, Society of Automotive Engineers, 2006. This paper received the **2006 Arch T. Colwell Merit Award**, which was established by Arch Colwell to recognize authors of outstanding papers presented at SAE meetings. Papers are judged for their value as contributions to existing knowledge of mobility engineering, and primarily with respect to their value as an original contribution to the subject matter.
9. **Fenton, Stephen J.**, “Using Photogrammetric Animations to Effectively Present Your Accident Reconstruction to the Jury,” American Bar Association (ABA), 2006
10. Rose, Nathan A., **Fenton, Stephen J.**, “[Crush and Conservation of Energy Analysis: Toward a Consistent Methodology](#),” 2005-01-1200, Society of Automotive Engineers, Warrendale, PA, 2005.
11. Neale, W., **Fenton, Stephen J.**, McFadden, S., Rose, Nathan, “[A Video Tracking Photogrammetry Technique To Survey Roadways for Accident Reconstruction](#),” 2004-01-1221, Society of Automotive Engineers, Warrendale, PA, 2004.
12. Rose, Nathan A., **Fenton, Stephen J.**, “[An Examination of the CRASH3 Effective Mass Concept](#),” 2004-01-1181, Society of Automotive Engineers, Warrendale, PA, 2004.
13. Rose, Nathan A., **Fenton, Stephen J.**, Hughes, Christopher M., “[Integrating Monte Carlo Simulation, Momentum-Based Impact Modeling, and Restitution Data to Analyze Crash Severity](#),” 2001-01-3347, Society of Automotive Engineers, Warrendale, PA, 2001.
14. **Fenton, Stephen J.**, Neale, William, Rose, Nathan A., Hughes, Christopher, “[Determining Crash Data Using Camera-Matching Photogrammetric Technique](#),” 2001-01-3313, Society of Automotive Engineers, Warrendale, PA, 2001.

15. **Fenton, Stephen**, Rose, Nathan A., Johnson, Wendy, “[Using Digital Photogrammetry to Determine Crash Severity](#),” Proceedings of the International Crashworthiness Conference, September 2000.
16. **Fenton, Stephen J.**, “Forensic Engineering Comparison of Two & Three Dimensional Photogrammetric Accident Analysis,” *National Academy of Forensic Engineering* (NAFE), REF:308S, Photogrammetric Accident Analysis.
17. **Fenton, Stephen J.**, Johnson, Wendy, LaRocque, Jaime, Rose, Nathan A., “[Using Digital Photogrammetry to Determine Vehicle Crush and Equivalent Barrier Speed](#),” 1999-01-0439, Society of Automotive Engineers, Inc., Warrendale, PA, 1999.
18. **Fenton, Stephen J.**, “Laying the Foundation of an Automotive Product Liability Case Using Photogrammetry,” American Trial Lawyers Association, 2003 Annual Convention, San Francisco, California, July 22, 2003.
19. **Fenton, Stephen J.**, “Photographs Help Reconstruct Princess Diana Crash,” Illinois Association of Traffic Accident Investigators (IATAI) Newsletter, December 21, 1998.
20. **Fenton, Stephen J.**, “Reconstructing the Princess Diana Crash,” Law Enforcement Technology, August 1998.
21. **Fenton, Stephen J.**, “Princess Diana Car Crash Animation,” Digimation, Siggraph ’98 3D software, 1998.
22. **Fenton, Stephen J.**, “Automotive Airbags,” *Accident Investigation Quarterly*, Issue 16, Fall 1997.
23. **Fenton, Stephen J.**, “[Accident Scene Diagramming Using New Photogrammetric Technique](#),” Society of Automotive Engineers (SAE) paper 970944, 1997.
24. **Fenton, Stephen J.**, “Operations Manual - Surveying Operations,” Peter Kiewit Sons’ Inc, 1993.

Committee Publications

1. SAE Accident Investigation and Reconstruction Practices Committee, Joe Marsh, Sponsor, “Reaffirmation of J1301 – Truck Deformation Classification,” Society of Automotive Engineers (SAE) J1301.
2. SAE Accident Investigation and Reconstruction Practices Committee, Joe Marsh, Sponsor, “Reaffirmation of J224 – Collision Deformation Classification,” Society of Automotive Engineers (SAE) J224.
3. SAE Accident Investigation and Reconstruction Practices Committee, John Marcosky, Sponsor, “Ethics for Accident Investigation and Reconstruction,” Society of Automotive Engineers (SAE) J2314.
4. SAE Accident Investigation and Reconstruction Practices Committee, “Equidistant Crush Measurement Techniques,” Society of Automotive Engineers (SAE) J2433, In Press.

Grants and Funded Research

1. “A Method to Quantify Vehicle Dynamics and Deformation for Vehicle Rollover Tests Using Camera-Matching Video Analysis,” funded, in part, by **Ford Motor Company**, 2007.
2. “Image Analysis of Rollover Crash Test Using Photogrammetry,” funded, in part, by **Ford Motor Company**, 2005-06.
3. “Chimney Rock Preservation and Access Project,” Awarded Grant, **Colorado Historical Society**, Grant #96-02-104.
4. “Photogrammetric Ruin Documentation Project,” Awarded Grant, **Colorado Historical Society**, Grant #96-01-095.
5. “Survey and Documentation of Parabaloid at Zeckendorf Plaza,” Awarded Grant, **Colorado Historical Society**, 1995 Mini Grant.

Presentations and Courses Taught

1. “Effectively Packaging and Presenting Complex Accident Reconstruction Concepts”, Presented at the American Bar Association 2014 Emerging Issues in Motor Vehicle Product Liability Litigation Conference, Phoenix, AZ, April 3, 2014.
2. “Utilizing Today’s Technology in Reconstructing Accidents”, Presented at the American Bar Association 2012 Emerging Issues in Motor Vehicle Product Liability Litigation Conference, Phoenix, AZ, March 29, 2012.
3. “Determining Driver Error from Tire Marks and Quantifying the Severity of Highway Barrier Collisions,” California Department of Transportation Tort Conference, San Diego Hilton, May 21, 2009.

4. "Rollovers and Guardrail Impacts", California Department of Transportation, Los Angeles, CA, August 7, 2007.
5. "When the Traffic Collision Report is of No Help", California Department of Transportation, Santa Barbara, CA, May 24, 2007.
6. "Accident Reconstruction and Animation in Rollover Cases", Mercedes-Benz, San Francisco, CA, May 4, 2007.
7. Accident Investigation Methods, Mercedes and DaimlerChrysler, Tokyo, Japan, February 9, 2007.
8. Accident Investigation Methods, Mercedes and DaimlerChrysler, Seoul, South Korea, February 7, 2007.
9. Handling, Stability and Rollovers, Ford Motor Company, Detroit, MI, July 31 through August 2, 2006.
10. "The Admissibility of Computer Simulations and Animations in Trial", Presented at the Association of Southern California Defense Counsel (ASCDC) 2005 Products Liability Meeting, Los Angeles, CA, November 3, 2005.
11. "Using Photogrammetric Animations to Effectively Present Your Accident Reconstruction to the Jury", Presented at the American Bar Association 2005 Emerging Issues in Motor Vehicle Product Liability Litigation Conference, Phoenix, AZ, March 31, 2005.
12. Course in Close-Range Photogrammetry, Presented at SAE World Congress, March, 2003.
13. Presentation on Close-Range Photogrammetry, Society of Automotive Engineers, Phoenix, 2002.
14. "Determining Crash Data Using Camera Matching Photogrammetric Technique", Presented at the Society of Automotive Engineers' International Body Engineering Conference & Exhibition (IBEC) and The Automotive & Transportation Technology Congress (ATT), in Paris France on July 11, 2002; paper number 2001-01-3313.
15. "Integrating Monte Carlo Simulation, Momentum-Based Impact Modeling, and Restitution Data to Analyze Crash Severity", Presented at the Society of Automotive Engineers' International Body Engineering Conference & Exhibition (IBEC) and The Automotive & Transportation Technology Congress (ATT), in Paris France on July 11, 2002; paper number 2001-01-3313.
16. "Technology in Product Liability Cases", Speaker, 2000 CDLA annual conference in Steamboat Springs, Colorado, August 19, 2000.
17. "State of the Art Technologies in Accident Reconstruction", Speaker, National Association of Independent Insurance Adjusters 63rd Annual Convention, Keystone, Colorado, May 25, 2000
18. "Distal Lower Extremity Fractures", Contributed Video Simulation Production, Member - San Diego CIREN team, CIREN Quarterly Meeting, Washington, D.C., May 5, 2000.
19. "Accident Reconstruction Techniques and Practices", Society of Automotive Engineers, Colorado Section Meeting, Knott Laboratory Media Center, January 19, 2000
20. "The Role of Computers in Accident Reconstruction", Knott Laboratory, Inc., Englewood, Colorado, October 26, 1999.
21. "New Technologies in Accident Reconstruction", Colorado Defense Lawyer's Association Conference, Vail, Colorado, August 13-14, 1999.
22. "New Technologies in Accident Reconstruction", Wyoming Trial Lawyer's Association Conference, Jackson Hole, Wyoming, June 16, 1999.
23. "Courtroom Use of Photogrammetry", Knott Laboratory, Inc., Denver, Colorado, April 15, 1999.
24. "Using Digital Photogrammetry to Determine Vehicle Crush & Equivalent Barrier Speed (EBS)", Society of Automotive Engineers (SAE), International Congress & Exposition, Accident Reconstruction Session, Cobo Hall, Detroit, Michigan, March 2, 1999.
25. "Photogrammetric Reconstruction," Attorneys Information Exchange Group, Air Bag Summit, Kansas City, Missouri, May 17, 2002.
26. "State-of-the-Art Technology in Accident Reconstruction", Montgomery, Little and McGrew Law Firm, Denver, Colorado, February 26, 1999.
27. "Princess Diana Accident Reconstruction: A Case Study Utilizing Photogrammetry and Computer Animation", Northeastern University Law Enforcement Exposition, Boston, MA, November 17-18, 1998.
28. "Vehicular Accident Reconstruction-Case Studies and Future Technologies", Allstate Insurance Company, Englewood, Colorado, November 11, 1998.

29. "Vehicular Accident Reconstruction as it Relates to Parking Lot and Low Speed Accidents", Allstate Claim Service, Highlands Ranch, Colorado, October 15, 1998.
30. "Accident Reconstruction: State-of-the-Art Technology", Knott Laboratory, Inc., Denver, Colorado, October 7, 1998.
31. "State-of-the-Art Technology in Accident Reconstruction", Colorado Claims Association Annual Seminar, Englewood, Colorado, October 2, 1998.
32. "Auto Litigators at Dawn: Reconstructing the Princess Di Automobile Crash", Colorado Trial Lawyers Association (CTLA) 1998 Annual Convention, Steamboat Springs, Colorado, July 30-August 2, 1998.
33. "Product Liability", Knott Laboratory, Inc., Denver, Colorado, April 9, 1998.
34. "Photogrammetry & Animations", Colorado Trial Lawyers Association, CLE Spring Training Seminar, Tucson, Arizona, March 20, 1998.
35. "Seat Belts and Airbags: Current Technology", Knott Laboratory, Inc., Denver, Colorado, March 19, 1998.
36. "State-of-the-Art Techniques in Forensic Engineering", Mile High Optimists Club, The University Club, Denver, Colorado, March 5, 1998.
37. "Computer Animation and Photogrammetry", Paul S. Edwards & Associates, Colorado Springs, Colorado, February 13, 1998.
38. "Photogrammetric Accident Reconstruction", Colorado Bar Association, Colorado Springs, Colorado, January 15, 1998.
39. "Discovery Magazine – Science Behind the Headlines" Documentary, Discovery Channel, November 11, 1998.
40. "Date Line NBC – Princess Diana Accident", Guest Presenter, Television News Magazine, NBC, October 1997.
41. "Low Speed Accident Investigation", Knott Laboratory, Inc. Denver, Colorado, October 18, 1997.
42. "Seat Belt and Airbag Investigation", Knott Laboratory, Inc., Denver, Colorado October 16, 1997.
43. "Accident Reconstruction - Accident Scene Diagramming Using New Photogrammetric Technique", Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, February 27, 1997.
44. "Forensic Animation", Nebraska Association of Trail Attorneys, Omaha, Nebraska, August 1996.
45. "Forensic Animations - How to control costs, hire a credible engineer, and use animations as demonstrative evidence", Colorado Bar Association - Technical Division Meeting, Denver, Colorado, March 1, 1995.
46. "Forensic Animation", First Judicial Bar Association, Jefferson County Courthouse, Golden, Colorado, February 13, 1995.
47. "Forensic Photogrammetry", Nebraska State Attorney's Office, Omaha, Nebraska, May 1994.

Technical Conferences and Seminars

1. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2013.
2. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2011.
3. Bosch Crash Data Retrieval (CDR) System® Level 1 and Level 2 Technician Course, Kineticorp, LLC, Greenwood Village, CO, March 8, 2011.
4. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2010.
5. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2009.

6. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2008.
7. "FMVSS No. 126 ESC Compliance Test Procedure Technical Workshop & Demonstration" Presented by the National Highway Traffic Safety Administration at TRC, November 7, 2007.
8. SAE Motor Vehicle Fire Investigation Task Force Meeting, Detroit, MI, April, 2007
9. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Detroit, Michigan, April, 2007.
10. CIREN Case Review, Multidisciplinary Meeting, University of Michigan, April 4, 2007
11. CIREN Case Review, Multidisciplinary Meeting, University of Michigan, October 20, 2006.
12. Handling, Stability and Rollovers, Ford Motor Company, Detroit, MI, July 31 through August 2, 2006.
13. Brake Certification Seminar, Colorado Motor Carriers Association, July 27, 2006.
14. CIREN Case Review, Multidisciplinary Meeting, University of Michigan, May 24, 2006.
15. Accident Reconstruction Symposium, Society of Automotive Engineers (SAE), Ventura, CA, November 8-9, 2005.
16. CIREN Case Review, Multidisciplinary Meeting, University of Michigan, November, 2005.
17. SAE Motor Vehicle Fire Investigation Task Force Meeting, Detroit, MI, April, 2005.
18. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, April, 2005.
19. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, March, 2004.
20. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, March 3-6, 2003.
21. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, March 5-7, 2002.
22. SAE World Congress by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, March 5-8, 2001.
23. "Distal Lower Extremity Fractures", Video Simulation Production, Member - San Diego CIREN team, CIREN Quarterly Meeting, Washington, D.C., May 5, 2000.
24. PC-Crash & PC-Rectification Training Workshop, New Horizons Computer Center, Detroit, Michigan, March 3-4, 1999.
25. Technical Standards Committee Meeting on Engineering Ethics, Committee Member, Detroit, Michigan, March 2, 1999.
26. Value For Our World: The Innovation Challenge, Seminar by Society of Automotive Engineers (SAE), International Congress of Exposition, Cobo Hall, Detroit, Michigan, March 1-4, 1999.
27. Global Technology Partnering: Accident Reconstruction and Occupant Protection and Injury Assessment in the Automotive Crash Environment, seminar by Society of Automotive Engineers (SAE), International Congress and Exposition, Cobo Hall, Detroit, Michigan, February 26-27, 1997.